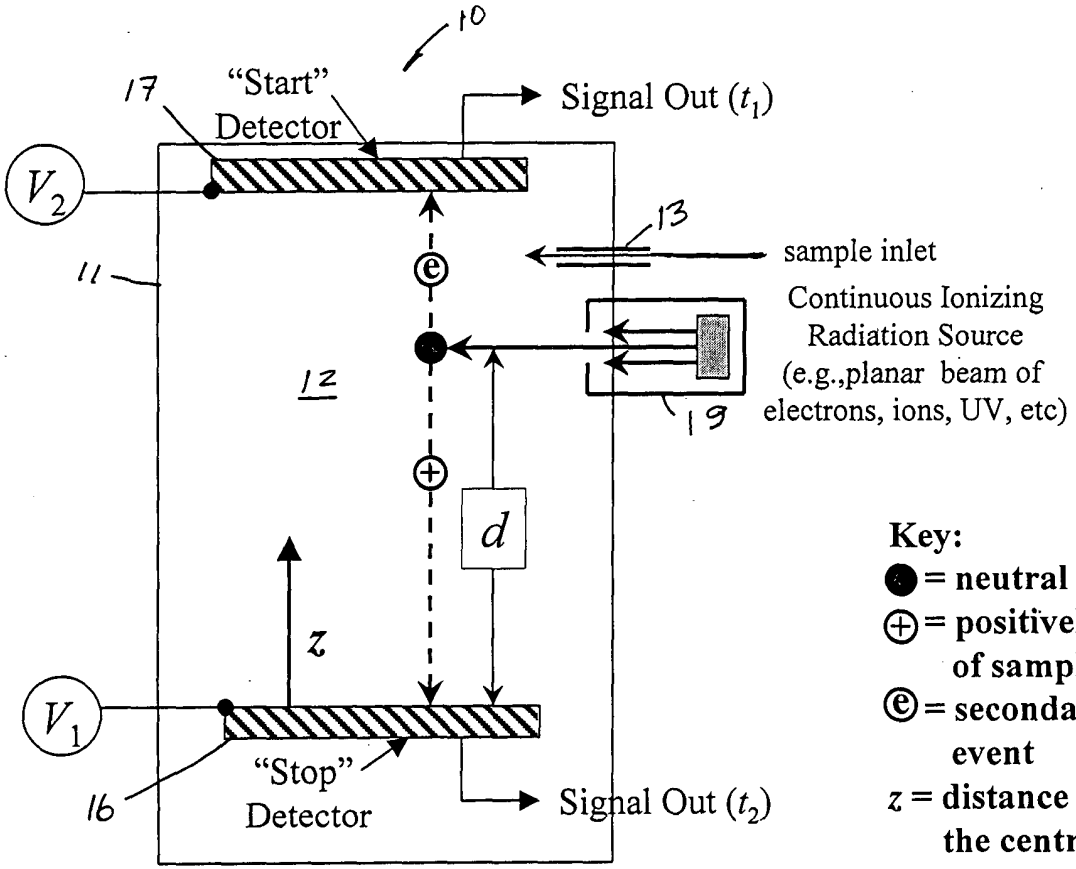
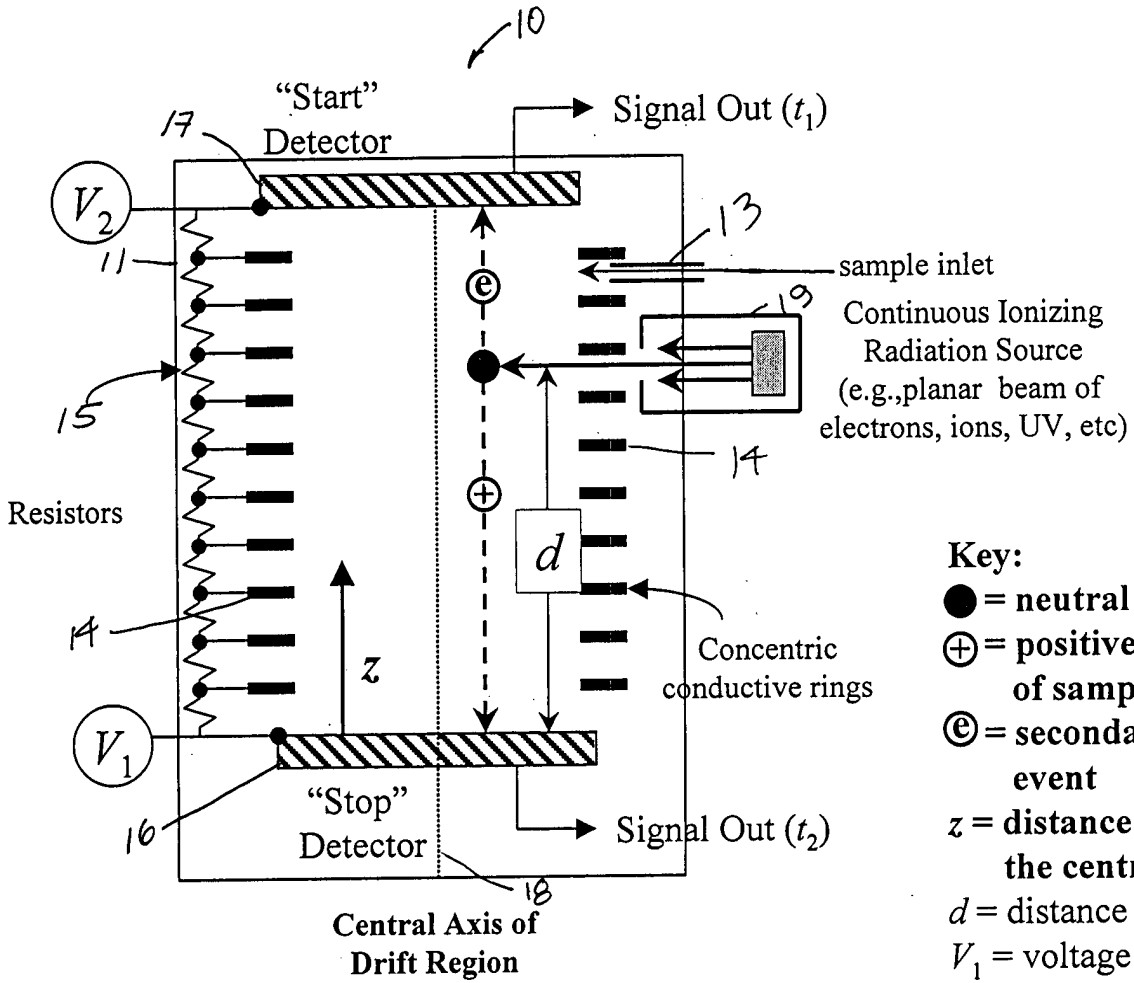


Key:

- ● = **neutral sample atom or molecule**
- ⊕ = **positively ionized neutral atom or molecule of sample**
- ⓔ = **secondary electron associated with ionization event**
- z = **distance from "stop" detector (parallel to the central axis of the drift region)**
- d = distance ion travels in drift region
- V_1 = voltage at "Stop" end of the drift tube
- V_2 = voltage at opposite end of drift tube ($V_1 < V_2$)

FIG. 1



Key:

● = **neutral sample atom or molecule**

⊕ = **positively ionized neutral atom or molecule of sample**

ⓔ = **secondary electron associated with ionization event**

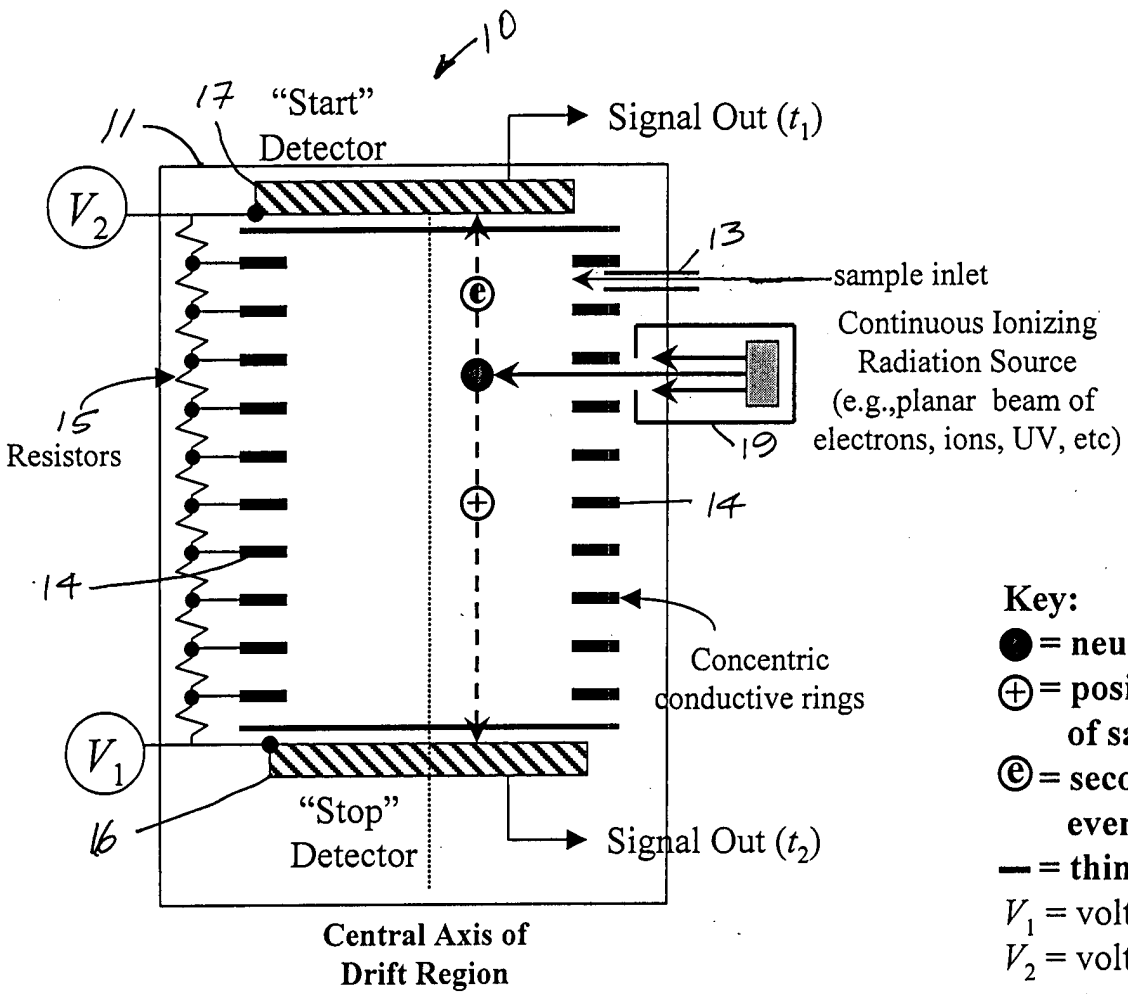
z = **distance from "stop" detector (parallel to the central axis of the drift region)**

d = distance ion travels in drift region

V_1 = voltage at "Stop" end of the drift tube

V_2 = voltage at opposite end of drift tube ($V_1 < V_2$)

FIG. 2



Key:

● = neutral sample atom or molecule

⊕ = positively ionized neutral atom or molecule of sample

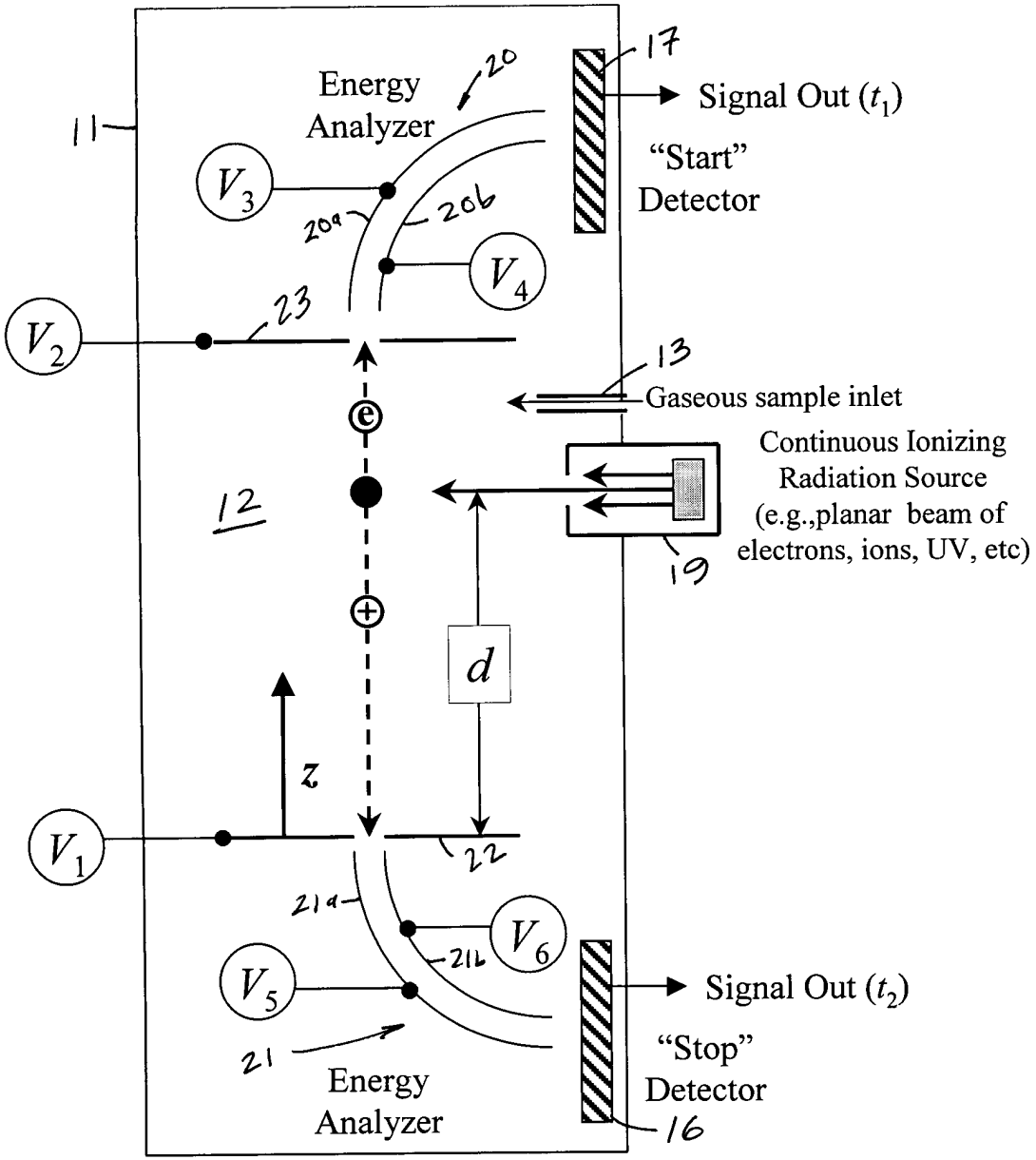
ⓔ = secondary electron associated with ionization event

— = thin foil

V_1 = voltage at "Stop" end of the drift tube

V_2 = voltage at opposite end of drift tube ($V_1 < V_2$)

FIG. 3



Key:

● = neutral sample atom or molecule

⊕ = positively ionized neutral atom or molecule of sample

ⓔ = secondary electron associated with ionization event

z = distance from "stop" detector (parallel to the central axis of the drift region)

d = distance ion travels in drift region

V_1 = voltage at "Stop" end of the drift tube

V_2 = voltage at opposite end of drift tube ($V_1 < V_2$)

V_3, V_4 = Electrostatic energy analyzer voltages

FIG. 4